

# SciBar & EC Shipping to FNAL

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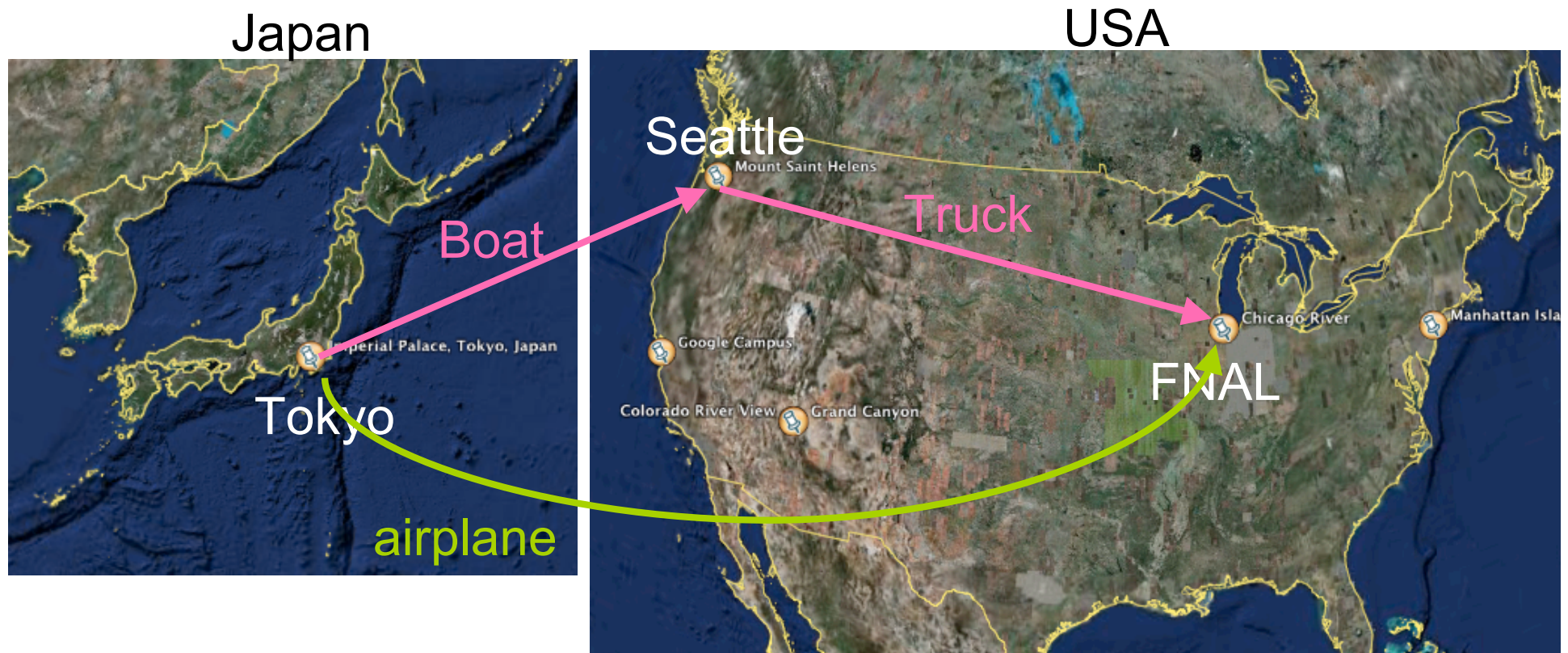
# Preparation for shipment

- SciBar (Kyoto)
  - Main part (scintillator)
    - Packing was done.
  - Detector components (PMT, elec. etc)
    - Packing was done.
- EC (Rome and Kyoto)
  - Main part (lead&fiber module)
    - Container is designing  
(production of container: ~1 week)
  - Detector components (PMT, elec. etc)
    - Packing was done.

# Preparation for shipment (cont'd)

- Cost estimations from three companies;
  - American Overseas Transport (AOT)
  - Nippon express
  - Hitachi transport system
- To minimize cost, several types of shipping methods (air/sea freight etc) are being considered.
- Procedure for customs
  - In process with help of FNAL and KEK (US-Japan office)

# Transportation Methods



- Sea: [Tokyo] → boat → [Seattle] → truck → [FNAL]
- Air: [Narita] → plane → [O'Hare] → truck → [FNAL]

# Cost of transportation

- SciBar
  - Cost of transportation from KEK to US port (Seattle/O'Hare): **KEK-side money (US-JP)**
  - Cost of transportation from US port to FNAL: **FNAL-side money (US-JP)**
- EC
  - Cost of transportation of EC (main part and its components): **Support by Rome group**

# Shipping Plan

| Detector |  | Shipping method |
|----------|--|-----------------|
| SciBar   | Main part  | Sea             |
|          | Detector components<br>(electronics, fiber, PMT etc) | Air/Sea         |
| EC       | Main part  | Sea             |
|          | Detector components<br>(electronics, PMT etc)        | Sea             |

# Cost estimations

| Detector |                        | Cost  |   |
|----------|------------------------|---|---|
| SciBar   | Main part<br>(by sea)  | <u>Tokyo-Seattle:</u><br>2.2M yen (~\$18k)  | <u>Seattle-FNAL:</u><br>2.5M yen (~\$21k) |
|          | Components<br>(by air) | <u>Narita-O'Hare:</u><br>1.5M yen (~\$13k)  | <u>O'Hare-FNAL:</u><br>Now estimating     |
|          | Components<br>(by sea) | <u>Tokyo-Seattle:</u><br>820k yen (~\$6.8k) | <u>Seattle-FNAL:</u><br>Now estimating    |
| EC       | Main part<br>(by sea)  | <u>Tokyo-Seattle:</u><br>884k yen (~\$7.4k) | <u>Seattle-FNAL:</u><br>Now estimating    |
|          | Components<br>(by sea) |   |   |

# Schedule

- SciBar main part
  - Tokyo to Seattle:
    - May(JP) → June(US)
  - Seattle to FNAL:
    - June (Seattle)→July (FNAL)
- EC main part & EC components & SciBar components
  - Tokyo to Seattle:
    - May/June (JP) → June/July (US)
  - Seattle to FNAL:
    - June/July (Seattle)→July/Aug (FNAL)



# Summary

- SciBar and EC are ready to ship.
  - Packing is basically done.
  - Shipping preparation for customs is in process with help of FNAL and KEK.
- Cost & budget
  - Cost estimations are available
  - SciBar: KEK to a US port ← KEK side (US-JP)  
a US port to FNAL ← FNAL side (US-JP)
  - EC: all shipment will be supported by Rome group
- Schedule
  - SciBar main part arrived at FNAL: July
  - EC & SciBar components arrival: July - Aug

# Outlook

- Details of shipment is fixed soon
  - Schedule
  - Cost